APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER
SMITH, MARCUS

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>04 November 2008</u>.

2a)☒ This action is **FINAL.**   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>19-39</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>19-39</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   Claims 37 and 38 are objected to because of the following informalities: These

dependent claims are based on canceled claim 9, but they should be based on claim

34. Claims 37 and 38 will be examine as if they are based on claim 34 for examination

purposes. Appropriate correction is required.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set
> forth in section 102 of this title, if the differences between the subject matter sought to be patented and
> the prior art are such that the subject matter as a whole would have been obvious at the time the
> invention was made to a person having ordinary skill in the art to which said subject matter pertains.
> Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims 19-20, 22-28, 30-35, 37, and 38 are rejected under 35 U.S.C. 103(a) as

being unpatentable over Mizutani et al. (US 7,085,579) in view of Kamstra et al. (US

6,768,720) and Harsch (US 7,088,698).

With regard to claims 19, 27, and 34, Mizutani et al. teaches (see figure 2, 8, and

9): A method comprising:

establishing a radio link layer connection (Radio channel) between a radio

access network (BSC, 105) and a wireless communication device (mobile station, MS,

102) wherein the radio access network applies a radio link timer (state transition timer,

901b) to the radio link connection (column 6, lines 29-36), wherein the radio access network provides connectivity with a packet-switched network (column 7, lines 38-45);

establishing a data-link layer connection (PPP connection) over which data can be communicated between the wireless communication device and the radio access network (column 4, lines 40-52);

detecting that the wireless communication device stop communicating in a threshold period of time (see figure 9, there is no communication after data was sent to mobile station, the period of time is PPP keep alive timer 902. column 7, lines 25-30); and

responsively sending from the wireless communication device into a radio access network at least one keepalive signal (PPP keep alive packet: column 7, lines 25-30 and see step 802 in figure 8), wherein the at least one keepalive signal resets the radio link timer (state transition timer 901b: column 7, lines 39-45).

Mizutani disclose all of the subject matter as described above except for detecting neither sent nor received packet-based real-time media over the data-link layer connection. Mizutani Figure 9 just suggest that there was no communication since the last data was sent to mobile station.

However Kamstra et al. teaches method or sending a heartbeat packet (see figure 5) which is similar to a keep alive packet. And Kamstra et al. explicitly teaches how a node determines if a packet has been received or a packet has been transmitted before sending a heartbeat packet (see steps 520 and 550: column 5, lines 50-55) in order to keep link integrity in physical links.

Keeping link integrity in wireless system is keeping the connection active and
avoids disconnecting link. Therefore it would have been obvious to one having ordinary
skill in the art at the time invention was made to have method of determining if a packet
has been received or a packet has been transmitted as taught by Kamstra et al. in the
system of Mizutani in order to keep the connection active for greater efficiency.

The combination of Mizutani and Kamstra et al. discloses all of the subject matter
as described above except for wherein sending the keepalive signal into the radio
access network comprises sending the keepalive signal into the radio access network
for transmission of the keepalive signal, in turn, from the radio access network to a
destination in the packet-switched network. However Mizutani shows in figure 2 that the
PPP connection link starts at the mobile terminal and passes through base station
controller to the PDSN. Since PDSN is a part of PPP connection, a person with ordinary
skilled in the art would view Mizutani system as implicitly teaching forward PPP
keepalive message to the PDSN to sustain the complete connection.

Harsch explicitly teaches a method teaches a mobile device that sends keepalive
packets to a server (figure 5, step 375: column 11, lines 60-67 and column 12, lines 1-
20) in order to prevent the server from prematurely ending the current connection
(column 3, lines 50-62)

Therefore it would have been obvious to one having ordinary skill in the art at the
time invention was made to have base station/base station controller forward the mobile
device's keepalive signal to a server as taught by Harsch in the system of Mizutani and
Kamstra et al. in order to prevent the server from prematurely ending the current

connection. The server is viewed as the destination in the packet-switched network, which is also the PDSN in the Mizutani's system.

With regard to claims 20, 28, and 35, Harsch teaches:

wherein destination in the packet-switched network is a communication server (PDSN) that bridges voice-over-packet communications between the wireless communication device and one or more other devices (column 2, lines 20-35: Server is a clearinghouse (bridge) for inter mobile communications, which can be views one wireless device talking to another wireless device.)

With regard to claims 22, 30, and 37, Mizutani et al. teaches: wherein sending at least one keepalive signal comprises periodically sending keepalive signals (column 7, lines 39-45, PPP keep alive packet is only sent periodically based on the PPP keep alive timer).

With regard to claims 23, 31, and 38, Mizutani et al. teaches: wherein the radio access network imposes a radio-link timeout period, and wherein periodically sending keepalive signals comprises: sending keepalive signals at a period that is shorter than the radio-link timeout period (column 7, lines 8-16).

With regard to claim 24, Mizutani et al. teaches: wherein, the wireless communication device communicates with the radio access network over a radio-link, and wherein sending at least one keepalive signal into the radio access network comprises: sending keepalive signals into the radio-access network in order to hold open the radio link layer connection (column 6, lines 60-65)

With regard to claims 25, and 32, Mizutani et al. teaches: wherein the keepalive signal comprises packet data (see figures 18 and 19).

With regard to claims 26, and 13, Mizutani et al. teaches:, wherein the keepalive signal, is an empty Real-time Transport Protocol (RTP) packet (See figures 18 and 19, the examiner views the packets as empty RTP packet since does not carry any multimedia (RTP) data in the PPP connection).

4.   Claims 21, 29, 36, and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mizutani, Kamstra et al., and Harsch as applied to claims 19/ 27/34 above, and further in view of Yao et al. (US 5,983,114).

With regard to claims 21, 29, and 36, Mizutani et al. teaches:

The combination of Mizutani, Kamstra et al., and Harsch discloses all of the subject matter as described above except for wherein the wireless communication device includes a push-to-talk button and wherein destination in the packet-switched network is a communication server that bridges voice-over-packet communications between the wireless communication device and one or more other devices

Yao et al. teaches a mobile device that has push-to-talk button (column 4, lines 35-50) in order to maintain link activity with minimum link power (column 4, lines 38-43). Figure 1 teaches a communication manager controls which remote unit talks, while other remote units are listeners (column 3, lines 15-40). It also similar to Mizutani since its the mobile device's PTT message is send to base station and then forward to communication manager or server or PDSN.

Therefore it would have been obvious to one having ordinary skill in the art at the time invention was made to have Mobile device have a push-to-talk button as taught by Yao et al. in the system of Mizutani, Kamstra et al. and Harsch in order to maintain link activity with minimum link power.

With regard to claim **39** (see claim 19, 20, 21):

Response to Amendment

5.   The amendment filed on 11/04/08 is sufficient to overcome the prior art reference.

Response to Arguments

6.   Applicant's arguments with respect to claims 19-39 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

7.   Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to MARCUS R. SMITH whose telephone number is

(571)270-1096. The examiner can normally be reached on Mon-Thurs: 7:30 am - 5:00

p.m. and every other Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Wing Chan can be reached on 571 272-7493. The fax phone number for

the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the

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published applications may be obtained from either Private PAIR or Public PAIR.

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Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a

USPTO Customer Service Representative or access to the automated information

system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MRS 1/07/08

/Wing F. Chan/
Supervisory Patent Examiner, Art Unit 2419
1/13/09